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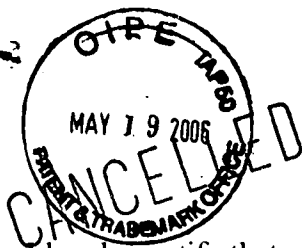
<b>TRANSMITTAL FORM</b>  (To be used for all correspondence after initial filing)	Application Number	10/542,936
	Filing Date	July 19, 2005
	First Named Inventor	Byoung-Joo Gwag
	Art Unit	1614
	Examiner Name	
	Attorney Docket No.	110200.404USPC

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement and Transmittal <input checked="" type="checkbox"/> 47 Cited References <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 <input type="checkbox"/> Response to Missing Parts/Incomplete Application	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Request for Corrected Filing Receipt <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Declaration <input type="checkbox"/> Statement under 37 CFR 3.73(b) <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Return Receipt Postcard <input type="checkbox"/> Other Enclosure(s) (please identify below): _____ _____ _____ _____
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	Seed Intellectual Property Law Group PLLC	Customer Number <b>00500</b>	
Signature			
Printed Name	Richard G. Sharkey, Ph.D.		
Date	May 19, 2006	Reg. No.	32,629

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Signature		
Typed or printed name	Lawrence Teague	Date: May 19, 2006

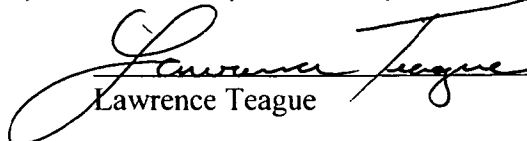
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Date

  
Lawrence Teague

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Byoung-Joo Gwag et al.  
Application No. : 10/542,936  
Filed : July 19, 2005  
For : METHOD FOR INHIBITION OF NECROSIS INDUCED BY  
NEUROTROPHIN

Art Unit : 1614  
Docket No. : 110200.404USPC  
Date : May 19, 2006

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Commissioner for Patents:

In accordance with 37 CFR 1.56 and 1.97 through 1.98, applicants wish to make known to the U.S. Patent and Trademark Office the references set forth on the attached Information Disclosure Statement. Copies of all cited references are enclosed. As to any reference cited, applicants do not admit that it is "prior art" under 35 U.S.C. §§ 102 or 103, and specifically reserve the right to traverse or antedate any such reference, as by a showing under 37 CFR 1.131 or other method. Although the aforesaid references are made known to the Patent and Trademark Office in compliance with applicants' duty to disclose all information they are

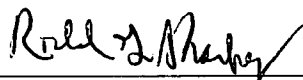
aware of which is believed relevant to the examination of the above-identified application, applicants believe that their invention is patentable.

Please acknowledge receipt of this Information Disclosure Statement and kindly make the cited references of record in the above-identified application.

Applicants believe this Information Disclosure Statement has been timely filed, however, the Director is authorized to charge any fee due by way of this Information Disclosure Statement to our Deposit Account No. 19-1090.

Respectfully submitted,

Seed Intellectual Property Law Group PLLC



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Richard G. Sharkey, Ph.D.  
Registration No. 32,629

RGS:ljt

Enclosures:

Postcard  
Transmittal Form  
Information Disclosure Statement  
Cited References (47)

701 Fifth Avenue, Suite 6300  
Seattle, Washington 98104-7092  
Phone: (206) 622-4900  
Fax: (206) 682-6031

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U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

10200.404USPC

APPLICATION NO.

10/547,936

APPLICANTS

Byoung-Joo Gwag et al.

FILING DATE

July 19, 2005

GROUP AND UNIT

1614

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## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

## U.S. PATENT DOCUMENTS

EXAMINER	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
/R.H./	AD	WO 01/79153	10/25/01	WIPO		
	AE					

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

/R.H./	AF	Alcántara, S. et al., "TrkB Signaling Is Required for Postnatal Survival of CNS Neurons and Protects Hippocampal and Motor Neurons from Axotomy-Induced Cell Death," <i>The Journal of Neuroscience</i> 17(10): 3623-3633, May 15, 1997.
	AG	Apfel, S.C., "Neurotrophic Factor Therapy – Prospects and Problems," <i>Clinical Chemistry and Laboratory Medicine</i> 39(4): 351-355 2001.
	AH	Bates, B. et al., "Neurotrophin-3 Promotes Cell Death Induced in Cerebral Ischemia, Oxygen-Glucose Deprivation, and Oxidative Stress: Possible Involvement of Oxygen Free Radicals," <i>Neurobiology of Disease</i> 9: 24-37, 2002.
	AI	Borasio, G.D. et al., "Involvement of ras p21 in Neurotrophin-induced Response of Sensory by Not Sympathetic Neurons," <i>The Journal of Cell Biology</i> 121(3): 665-672, May 1993.
	AJ	Bowling, A.C. et al., "Superoxide Dismutase Activity, Oxidative Damage, and Mitochondrial Energy Metabolism in Familial and Sporadic Amyotrophic Lateral Sclerosis," <i>Journal of Neurochemistry</i> 61(6): 2322-2325, December 1993.
	AK	Bradford, H.F. et al., "Neurotrophins in the Pathogenesis and Potential Treatment of Parkinson's Disease," <i>Advances in Neurology</i> 80: 19-25, 1999.
	AL	Brown S.A. et al., "Role of oxygen-derived free radicals in the pathogenesis of shock and trauma, with focus on central nervous system injuries," <i>Journal of the American Veterinary Medical Association</i> 200(12): 1849-1859, June 15, 1992.
	AM	Deshmukh, M. et al., "Programmed Cell Death in Neurons: Focus on the Pathway of Nerve Growth Factor Deprivation-Induced Death of Sympathetic Neurons," <i>Molecular Pharmacology</i> 51: 897-906, 1997.

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\* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).

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	110200.404USPC	10/542,936
	APPLICANTS	
	Byoung-Joo Gwag et al.	
	FILING DATE	GROUP ART UNIT
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### U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	BA						

### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	BB					

### OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

/R.H./	BC	Fernández-Sánchez, M.T. et al., "Basic fibroblast growth factor protects cerebellar neurons in primary culture from NMDA and non-NMDA receptor mediated neurotoxicity," <i>FEBS Letters</i> 335(1): 124-131, November 1993.
	BD	Ferrer, I. et al., "Brain-derived neurotrophic factor reduces cortical cell death by ischemia after middle cerebral artery occlusion in the rat," <i>Neuropathologica</i> 101(3): 229-238, 2001.
	BE	Friedman, B. et al., "BDNF and NT-4/5 Exert Neurotrophic Influences on Injured Adult Spinal Motor Neurons," <i>The Journal of Neuroscience</i> 15(2): 1044-1056, February 1995.
	BF	Frim, D.M. et al., "Implanted fibroblasts genetically engineered to produce brain-derived neurotrophic factor prevent 1-methy-4-phenylpyridinium toxicity to dopaminergic neurons in the rat," <i>Proc. Natl. Acad. Sci. USA</i> 91: 5104-5108, May 1994.
	BG	Gash, D.M. et al., "Functional recovery in parkinsonian monkeys treated with GDNF," <i>Nature</i> 380: 252-255, March 21, 1996.
	BH	Gwag, B.J. et al., "BDNF or IGF-1 potentiates free radical-mediated injury in cortical cell cultures," <i>Neuroreport</i> 7: 93-96, 1995.
	BI	Hall, E.D. et al., "Nonsteroidal Lazaroid U78517F in Models of Focal and Global Ischemia," <i>Stroke</i> 21(11 Suppl. III): III83-III87, November 1990.
	BJ	He, Y. et al., "6-Hydroxydopamine induced apoptosis of dopaminergic cells in the rat substantia nigra," <i>Brain Research</i> 858: 163-166, March 2000.
	BK	Hefti, F., "Nerve Growth Factor Promotes Survival of Septal Cholinergic Neurons After Fimbrial Transections," <i>The Journal of Neuroscience</i> 6(8): 2155-2162, August 1986.
	BL	Hetman, M. et al., "Neuroprotection by Brain-derived Neurotrophic Factor Is Mediated by Extracellular Sing-regulated Kinase and Phosphatidylinositol 3-Kinase," <i>The Journal of Biological Chemistry</i> 274(32): 22569-22580, August 6, 1999.
↓	BM	Holtzman, D.M. et al., "Nerve Growth Factor Protects the Neonatal Brain Against Hypoxic – Ischemic Injury," <i>Annals of Neurology</i> 39(1): 114-122, January 1996.

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	FILING DATE	GROUP ART UNIT
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	CA						

### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	CB					

### OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

/R.H./	CC	Hwang, J.-J. et al., "The role of NADPH oxidase, neuronal nitric oxide synthase and poly(ADP ribose) polymerase in oxidative neuronal death induced in cortical cultures by brain-derived neurotrophic factor and neurotrophin-4/5," <i>Journal of Neurochemistry</i> 82: 894-902, 2002.
	CD	Jin, Y. et al., "Transplants of Fibroblasts Genetically Modified to Express BDNF Promote Axonal Regeneration from Supraspinal Neurons Following Chronic Spinal Cord Injury," <i>Experimental Neurology</i> 177: 265-275, 2002.
	CE	Juurink, B.H.J. et al., "Review of Oxidative Stress in Brain and Spinal Cord Injury: Suggestions for Pharmacological and Nutritional Management Strategies," <i>Journal of Spinal Cord Medicine</i> 21(4): 309-334, October 1998.
	CF	Kim, S.H. et al., "Brain-derived neurotrophic factor can act as a pronecrotic factor through transcriptional and translational activation of NADPH oxidase," <i>The Journal of Cellular Biology</i> 159(5): 821-831, December 9, 2002.
	CG	Ko, M-L. et al., "The Combined Effect of Brain-Derived Neurotrophic Factor and a Free Radical Scavenger in Experimental Glaucoma," <i>Investigative Ophthalmology &amp; Visual Science</i> 41(10): 2967-2971, September 2000.
	CH	Koh, J-Y. et al., "Potentiated Necrosis of Cultured Cortical Neurons by Neurotrophins," <i>Science</i> 268: 573-575, April 28, 1995.
	CI	Levi-Montalcini, R., "The Nerve Growth Factor: thirty-five years later," <i>The EMBO Journal</i> 6(5): 1145-1154, 1987.
	CJ	Levivier, M. et al., "Intrastriatal Implantation of Fibroblasts Genetically Engineered to Produce Brain-Derived Neurotrophic Factor Prevents Degeneration of Dopaminergic Neurons in a Rat Model of Parkinson's Disease," <i>The Journal of Neuroscience</i> 15(12): 7810-7820, December 1995.
↓	CK	Lewis, G.P. et al., "Effects of the Neurotrophic Brain-Derived Neurotrophic Factor in an Experimental Model of Retinal Detachment," <i>Investigative Ophthalmology &amp; Visual Science</i> 40(7): 1530-1544, June 1999.

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DA						

### FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
				YES	NO
DB					

### OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

/R.H./	DC	Lobner, D. et al., "Neurotrophic Factor Effects on Oxidative Stress – Induced Neuronal Death," <i>Neurochemical Research</i> 28(5): 749-756, May 2003.
	DD	Louvel, E. et al., "Therapeutic advances in amyotrophic lateral sclerosis," <i>Trends in Pharmacological Sciences</i> 18: 196-203, June 1997.
	DE	Lovell, M.A. et al., "Copper, iron and zinc in Alzheimer's disease senile plaques," <i>Journal of the Neurological Sciences</i> 158: 47-52, 1998.
	DF	Montine, T.J. et al., "Crosslinking of Apolipoprotein E by Products of Lipid Peroxidation," <i>Journal of Neuropathology and Experimental Neurology</i> 55: 202-210, February 1996.
	DG	Morse, J. K. et al., "Brain-derived Neurotrophic Factor (BDNF) Prevents the Degeneration of Medial Septal Cholinergic Neurons Following Fimbria Transection," <i>The Journal of Neuroscience</i> 13(10): 4146-4156, October 1993.
	DH	Olson, L., "Toward trophic treatment in parkinsonism: A primate step," <i>Nature Medicine</i> 2(4): 400-401, April 1996.
	DI	Pérez-Navarro, E. et al., "Brain-Derived Neurotrophic Factor, Neurotrophin-3, and Neurotrophin-4/5 Prevent the Death of Striatal Projection Neurons in a Rodent Model of Huntington's Disease," <i>Journal of Neurochemistry</i> 75(5): 2190-2199, 2000.
	DJ	Samdani, A.F. et al., "Differential Susceptibility to Neurotoxicity Mediated by Neurotrophins and Neuronal Nitric Oxide Synthase," <i>The Journal of Neuroscience</i> 17(12): 4633-4641, June 15, 1997.
	DK	Siegel, G.J. et al., "Neurotrophic factors in Alzheimer's and Parkinson's disease brain," <i>Brain Research Reviews</i> 33(2-3): 199-227, September 2000.
	DL	Smith, M.A. et al., "Oxidative Posttranslational Modifications in Alzheimer Disease. A Possible Pathogenic Role in the Formation of Senile Plaques and Neurofibrillary Tangles," <i>Molecular And Chemical Neuropathology</i> 28(1-3): 41-48, May-August 1996.
	DM	Smith, M.A. et al., "Iron accumulation in Alzheimer disease is a source of redox-generated free radicals," <i>Proc. Natl. Acad. Sci. USA</i> 94: 9866-9868, September 1997.
↓	DN	Smith, M.A. et al., "Radical AGEing in Alzheimer's disease," <i>Trends in Neurosciences</i> 18(4): 172-176, April 1995.

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EA						

**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
				YES	NO
EB					

**OTHER ART** (Including Author, Title, Date, Pertinent Pages, Etc.)

/R.H./	EC	Springer, J.E. et al., "4-Hydroxynonenal, a Lipid Peroxidation Product, Rapidly Accumulates Following Traumatic Spinal Cord Injury and Inhibits Glutamate Uptake," <i>Journal of Neurochemistry</i> 68(6): 2469-2476, 1997.
↓	ED	Tatton, N.A. et al., "In situ detection of apoptotic nuclei in the substantia nigra compacta of 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine-treated mice using terminal deoxynucleotidyl transferase labeling and acridine orange staining," <i>Neuroscience</i> 77(4): 1037-1048, April 1997.
	EE	Turmel, H. et al., "Caspase-3 Activation in 1-methyl-4-Phenyl-1,2,3,6-Tetrahydropyridine (MPTP)-Treated Mice," <i>Movement Disorders</i> 16(2): 185-189, March 2001.
	EF	Vitek, M.P. et al., "Advanced glycation end products contribute to amyloidosis in Alzheimer disease," <i>Proc. Natl. Acad. Sci. USA</i> 91: 4766-4770, May 1994.
	EG	Won, S.J. et al., "NT-4/5 Exacerbates Free Radical-Induced Neuronal Necrosis <i>in Vitro</i> and <i>in Vivo</i> ," <i>Neurobiology of Disease</i> 7: 251-259, 2000.
	EH	Yao, R. et al., "Requirement for Phosphatidylinositol-2 Kinase in the Prevention of Apoptosis by Nerve Growth Factor," <i>Science</i> 267: 2003-2006, March 31, 1995.
	EI	
	EJ	
	EK	
	EL	

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